

USE OF TETRAFUNCTIONAL INITIATORS TO  
IMPROVE THE RUBBER PHASE VOLUME OF HIPS

Abstract of the Disclosure

5        It has been discovered that improved polystyrene products, such as high impact polystyrene (HIPS), may be obtained by polymerizing styrene with a diene polymer in the presence of at least one multifunctional initiator. The presence of the multifunctional initiator tends to cause more branched structures in the polystyrene. Unexpectedly, the ratio of % gel to % rubber (G/R or rubber phase volume) increases as the swell index increases which is the opposite of the conventional trend. Additionally, acceptable G/R values can be achieved at increased polymerization rates with these initiators.

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